

ARTISAN®
TECHNOLOGY GROUP

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Find the *Radiant Imaging PM-1433-1* at our website: *Click HERE*

RADIANT IMAGING

CCD Imaging Photometer and Colorimeter

PM-1400F™ Series



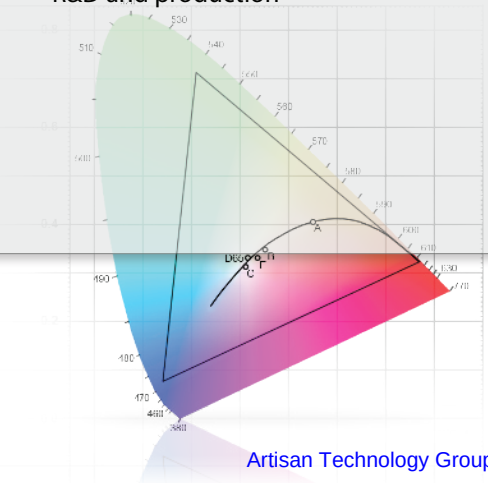
High precision imaging colorimeter for display and light source measurement

Applications

- Brightness and color uniformity testing for any display technology
- Display defect detection for pixel, line and mura defects
- Testing and correction of LED video screens and video walls
- Illumination distribution measurement

Benefits

- Provides quantitative measurements that correspond to human perception of brightness and color
- Fast, accurate luminance and color measurements
- Easy to use measurement control and image analysis software allows detailed data evaluation
- Industry leading warranty and technical support ensure successful applications in both R&D and production



The PM-1400F™ Series of imaging photometers and colorimeters delivers an excellent balance of wide dynamic range, high spatial resolution, large field of view, and speed. This makes it the first choice for demanding measurement, calibration and defect detection tasks in both production and laboratory environments. The CCDs used in the PM-1400F™ series are full-frame CCDs with 100% fill factor, making them ideally suited for resolving small features on instrument panels or keypads, for measuring small features such as the brightness and color of individual LED or OLED pixels or sub-pixels, or for finding small defects, such as display pixel defects.

The PM-1400F™ series use 14-bit (over 16,000 gray levels), thermoelectrically cooled and temperature stabilized, scientific grade CCDs for accuracy and repeatability. There are three different CCD resolutions available—768 x 512, 1,536 x 1,024 and 3,072 x 2,048—each with an optimal application area. For added versatility and measurement speed, the higher resolution CCDs can be operated at lower resolutions with electronically binned pixels. In addition, each model is available in either a photometric or a colorimetric configuration.

All F-Series™ cameras include motorized filter wheels, for both the CIE matched filters and a set of internal neutral density filters, and Radiant Imaging's patent-pending precision internal shutter. A wide selection of lenses is available, allowing the field of view and working distance to be tailored to the application. The F-Series™ models include numerous design improvements over earlier Radiant Imaging photometers and colorimeters to provide enhanced performance, improved reliability, and easier maintenance for their users.

Each PM-1400F™ series imaging photometer and colorimeter comes with Radiant Imaging's ProMetric® control and analysis software, which provides complete measurement control and an extensive suite of image analysis functions. ProMetric® software functions can be externally accessed through PMEngine™ .NET (Framework 2.0) controls so users can build custom test and analysis sequences.

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PM-1400F™ Series



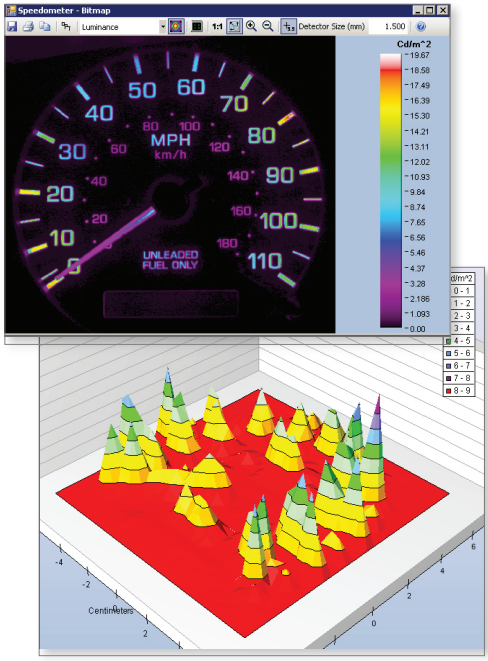
Key Features

- 14-bit, full frame, temperature stabilized CCD sensor
- Integrated CIE matched color filters and neutral density filters
- Precision, patent-pending, high speed internal shutter
- Broad selection of CCD resolutions and lenses
- Complete ProMetric® control and analysis software support

Specifications*

Spatial measurement capabilities	Luminance, Radiance, Illuminance, Irradiance, Luminous Intensity, Radiant Intensity, CIE Chromaticity Coordinates, L*a*b* Color Scale, Correlated Color Temperature (CCT), Dominant Wavelength		
Units	Footlambert, Cd/cm^2, Cd/m^2, Nit, Mnit, mnit, W/sr/m^2, W/sr/ft^2 , W/sr/cm^2, mW/sr/m^2, Footcandles, Lux, mLux, Mlux, Lux-Sec, W/m^2, W/ft^2, W/cm^2 , mW/m^2, MW/m^2, W-Sec/m^2, Candela, W/sr, CIE (x,y) and (u', v'), Kelvin (CCT)		
CCD resolution	768x512, 1,536x1,024, or 3,072x2,048 pixels		
CCD A/D dynamic range	14 bits = 16,384 gray scale levels		
Luminance range	0.001 nit minimum$_3$ 10^{10} nit maximum with optional ND filters		
System accuracy	Illuminance Luminance (Y) Color Coordinates (x,y)	± 3%$_1$ ± 3%$_1$ ± 0.003$_1$	
Short-term repeatability	Illuminance Luminance (Y) Color Coordinates (x,y)	± 0.5%$_2$ ± 0.5%$_2$ ± 0.0006$_2$	
Interface	USB2.0		
Minimum measurement time (for 100 cd/m^2), photopic and color	768x512 CCD 1,536x1,024 CCD 3,072x2,048 CCD	1.8 seconds 2.3 seconds 7 seconds	5.5 seconds 8 seconds 25 seconds
Camera field of view	768x512 CCD 1,536x1,024 CCD 3,072x2,048 CCD	1° to 26° 3° to 50° 5° to 87°	
Dimensions	154mm x 242mm x 200mm (HxWxD)		
Weight	4.8kg		
Operating temperature	0–30° C		
Operating humidity	20 - 70% non-condensing		

** Specifications subject to change without notice*
Applicable only for color series



System Requirements

- 2.0 GHz or faster processor
- 1GB or greater RAM
- Windows® XP, Vista or 7 (32-bit)
- USB 2.0 interface

1 Based on Illuminant A, D65, or user calibration for specific spectra. Based on a virtual detector size of 100 pixels. Specification is for every point within the field of view of the camera.

2 At every point within the field of view of the camera, based on a virtual detector size of 100 pixels.

3 Uses minimum luminance measurement set-up.

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We buy equipment

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Visit us at **artisantg.com** for more info on price quotes, drivers, technical specifications, manuals, and documentation.

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We're here to make your life easier. How can we help you today?

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